

**FAS – Office of Global Analysis (OGA)**  
**United States Department of Agriculture (USDA)**  
**International Operational Agriculture Monitoring Program**



**November Summary**

**December 10<sup>th</sup>, 2007**

1. After a short-term drought, the rainfed winter wheat and barley regions of northern Iraq are experiencing the first significant rain events of the season, thus recharging topsoil moisture for planting. Despite a precipitation shortage at the beginning of the winter grains season, post finds that overall production prospects are improved for 2008. It is noted that rain-fed wheat and barley constitute 40-50 percent of the total wheat and barley production.
2. December 6<sup>th</sup>, 2007 Joint Agricultural Weather Facility states that cumulative precipitation remains below normal. Recent rain events have improved soil moisture conditions, and cumulative precipitation for Dahuk, Arbil and Ninawa provinces has increased closer to normal (Figure 1 & 2). Satellite derived surface wetness indices also show an increase in cumulative moisture for the northern regions.
3. Normalized Difference Vegetation Indices (NDVI) derived from MODIS satellite imagery and used to assess crop condition and abundance shows a slight decrease in overall green vegetation compared to the five year short-term average. A particularly interesting find is a significant increase of green vegetation in the Mesopotamia Marshes of southern Iraq, which could be partly attributed to the USAID restoration efforts (Figure 3).
4. AWiFS IRS-P6 satellite data continues to be collected over Iraq, in which the month of November nearly provides entire coverage (Figure 4). Maximum NDVI values for the month of November reveal that the largest abundance of green crops is located mostly in irrigated regions. Rainfed regions do not show significant greening as of yet, but next months NDVI composite will be used as a comparison.
5. Sample areas using Quickbird high resolution imagery provided by the National Geospatial Intelligence Agency (NGA) has consistently shown continued field preparation and a later start of season throughout the Northern provinces as compared to previous years. Image acquisition will continue throughout the growing season.

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Production:

Data Source: PSD Online

IRAQ WHEAT 2007/2008 (Lower-15 Provinces)*			
December 2007			
Date	Area Harvested (1000 Hectare)	Yield (MT/Hectare)	Production (MMT)
November (2007)	1800	1.22	2.20
2002/03	1650	1.57	2.59
2003/04	1715	1.36	2.33
2004/05	1540	1.19	1.83
2005/06	1800	1.22	2.20
2006/07	1514	1.51	2.29
Mean (‘02-‘07)	1643.8	1.37	2.25

\* Based on historical data, an additional 700 TMT of wheat production is estimated for the Kurdish region. This number will be reflected in a Grains Report scheduled for release before January lockup.

IRAQ BARLEY 2007/2008			
December 2007			
Date	Area Harvested (1000 Hectare)	Yield (MT/Hectare)	Production (TMT)
November (2007)	1000	0.8	800
2002/03	1300	0.77	1000
2003/04	1060	0.81	861
2004/05	957	0.84	805
2005/06	1137	0.66	754
2006/07	1025	0.9	920
Mean (‘02-‘07)	1095.8	0.8	868.0

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Data Source: COSIT online

<b>Wheat Production per Province from 2002 – 2006 (TMT)</b>					
<b>Province</b>	<b>Production (2002)</b>	<b>Production (2003)</b>	<b>Production (2004)</b>	<b>Production (2005)</b>	<b>Production (2006)</b>
Arbil	629.9	595.6	No Data	No Data	No Data
As Sulaymaniyah	228.7	222.0	No Data	No Data	No Data
At Tamin	102.4	146.3	236.7	342.7	240.7
Dahuk	199.3	159.0	No Data	No Data	No Data
Ninawa	243.4	360.0	534.9	378.2	500.8
Salah ad Din	101.2	150.0	88.4	114.3	122.7
Diyala	78.6	187.0	133.6	220.5	258.0
Al Anbar	35.5	52.4	52.8	38.0	76.6
Baghdad	45.7	121.0	63.3	97.1	95.0
Babil	64.3	172.1	51.4	93.4	92.8
Karbala	8.3	12.0	6.1	6.8	5.1
Wasit	270.9	350.3	282.2	411.0	288.4
Al Najaf	79.9	90.5	54.0	78.0	107.1
Al Qadisiyah	88.6	143.0	145.7	208.7	237.9
Al Muthanna	124.4	23.0	19.7	13.1	14.8
Dhi Qar	25.0	28.6	50.2	64.3	104.7
Maysan	62.0	95.0	97.8	148.1	125.4
Al Basrah	83.5	26.2	15.4	14.4	16.4
<b>Iraq Total</b>	<b>2.47</b>	<b>2.93</b>	<b>1.83</b>	<b>2.24</b>	<b>2.28</b>

<b>Barley Production per Province from 2002 – 2006 (TMT)</b>					
<b>Province</b>	<b>Production (2002)</b>	<b>Production (2003)</b>	<b>Production (2004)</b>	<b>Production (2005)</b>	<b>Production (2006)</b>
Arbil	149.3	147.4	No Data	No Data	No Data
As Sulaymaniyah	141.8	156.8	No Data	No Data	No Data
At Tamin	15.7	30.0	5.4	23.6	32.3
Dahuk	47.4	39.2	No Data	No Data	No Data
Ninawa	317.8	378.0	375.0	252.4	401.2
Salah ad Din	12.1	24.2	14.0	8.2	10.8
Diyala	38.1	133.0	27.8	43.1	40.5
Al Anbar	1.6	3.5	2.3	1.7	2.4
Baghdad	10.8	65.0	5.4	8.4	5.6
Babil	13.0	34.5	16.0	18.1	20.7
Karbala	0.5	1.0	2.1	2.5	2.4
Wasit	132.0	75.1	58.0	69.9	64.9
Al Najaf	0.6	0.8	1.4	2.0	1.6
Al Qadisiyah	68.8	119.0	106.1	121.1	136.6
Al Muthanna	13.1	30.2	30.3	18.1	19.5
Dhi Qar	29.6	34.3	97.0	90.1	95.1
Maysan	25.7	35.1	54.8	90.9	80.8
Al Basrah	14.4	8.5	6.2	4.4	4.9
<b>Iraq Total (MMT)</b>	<b>1.03</b>	<b>1.32</b>	<b>1.80</b>	<b>.75</b>	<b>.92</b>

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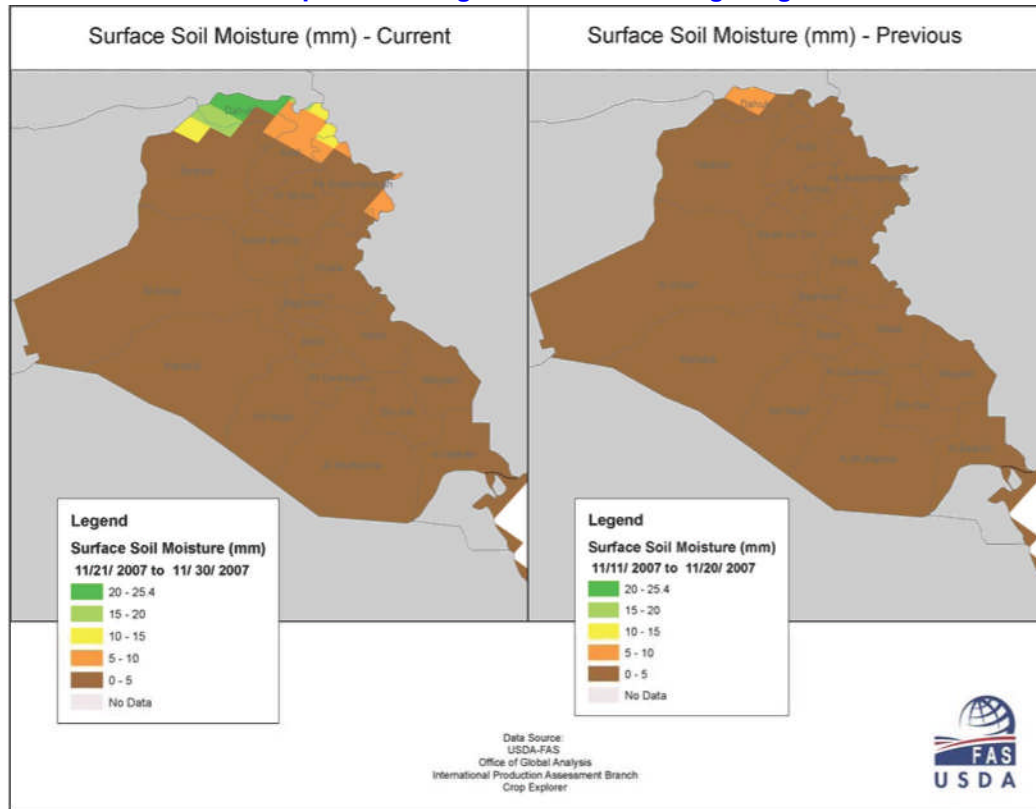


Figure 1: Increases in precipitation have boosted topsoil moisture in the northern rainfed regions of Iraq.

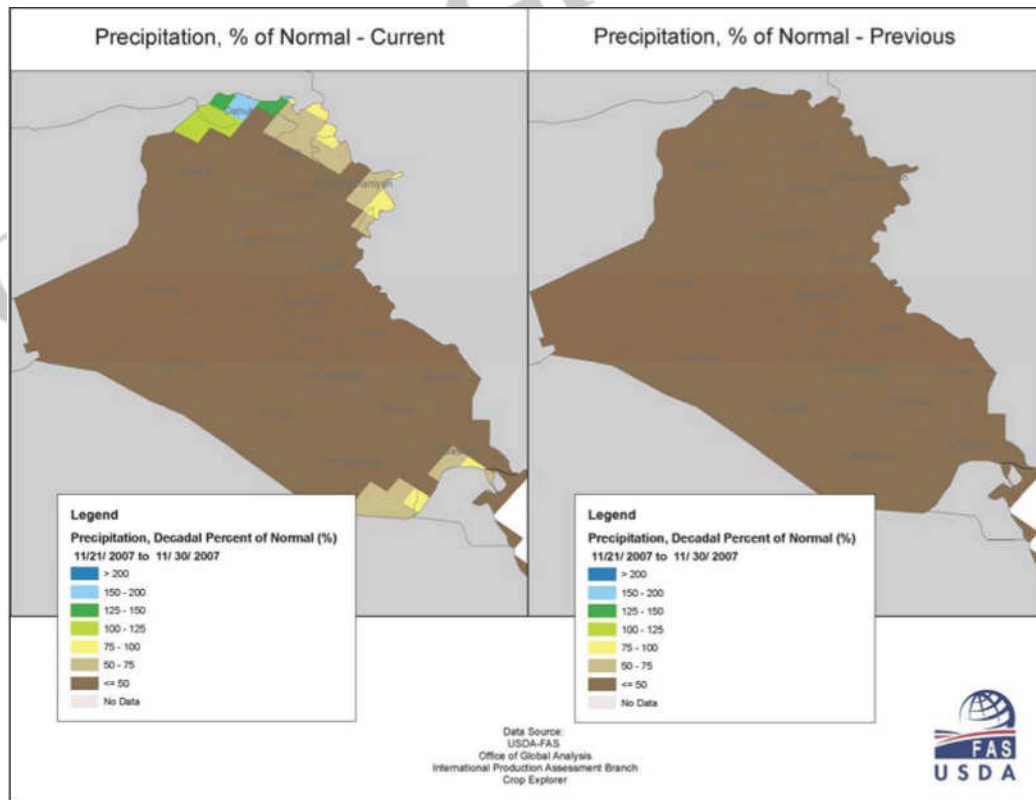


Figure 2: Precipitation in the Northern provinces has increased closer to the seasonal cumulative normal.

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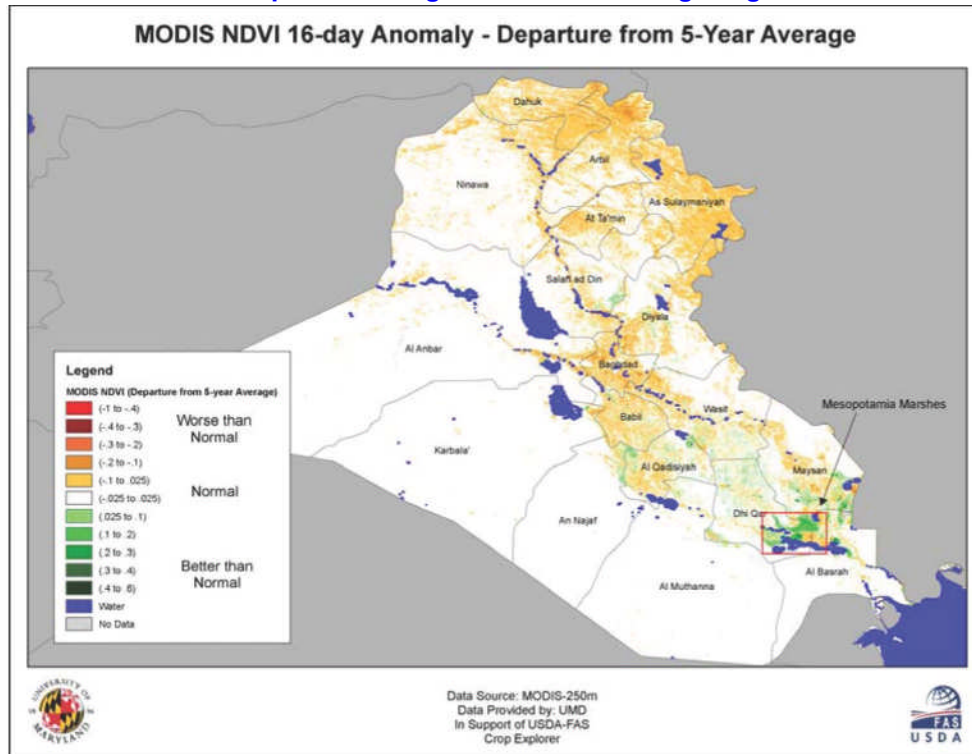


Figure 3: MODIS NDVI shows slightly lower than normal green vegetation cover for this time of the crop season.

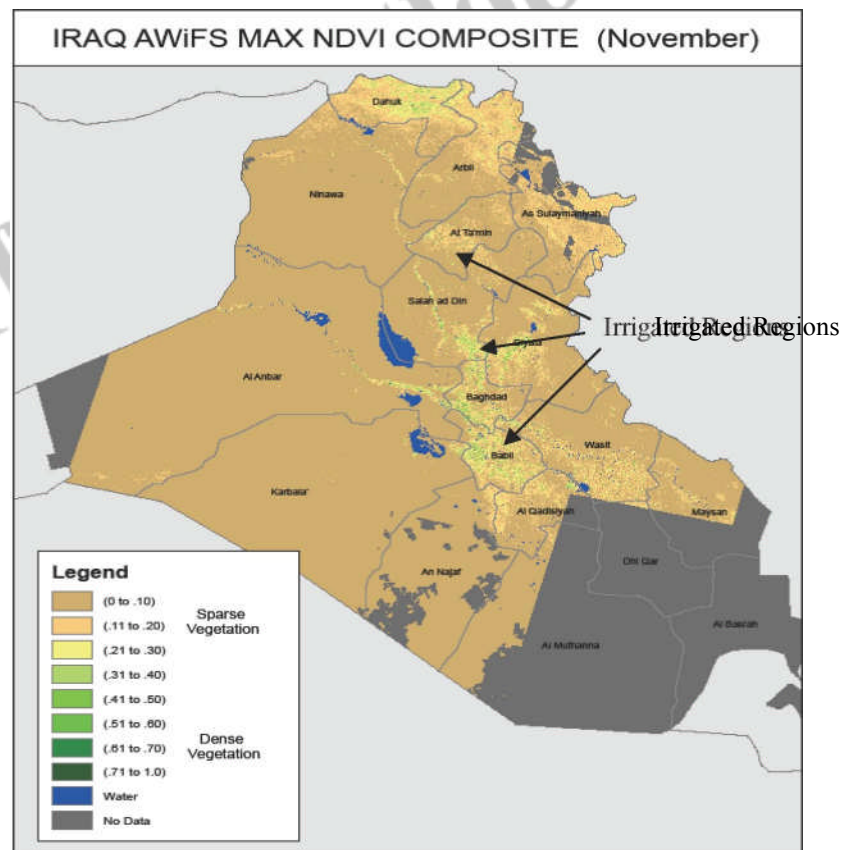


Figure 4: AWiFS derived NDVI for November reveals an abundance of dense green vegetation occurring in irrigated regions.